

AMENDMENTS TO THE CLAIMS

1. (Cancelled) An isolated protein comprising a member selected from the group consisting of:

- (a) a polypeptide of at least 30 contiguous amino acids from the polypeptide of SEQ ID NO: 2;
 - (b) the polypeptide of SEQ ID NO: 2;
 - (c) a polypeptide having at least 80% sequence identity to, and having at least one linear epitope in common with, the polypeptide of SEQ ID NO: 2; wherein the percent sequence identity is determined according to the GAP program in the Wisconsin Genetics Software Package, using the default settings; and
 - (d) a polypeptide encoded by a polynucleotide which selectively hybridizes under stringent hybridization conditions and a wash in 0.1XSSC at 60°C to a polynucleotide selected from the group consisting of SEQ ID NOS: 1, 5, and 7.
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2. (Currently Amended) A recombinant expression cassette comprising a polynucleotide operably linked to a promoter, wherein the polynucleotide expresses the polypeptide ~~expressing a member of claim 4~~ 77.

a'

3. (Currently Amended) A non-human host cell comprising the ~~recombinant expression cassette~~ polypeptide of claim 2 77.

4. (Currently Amended) A transgenic plant comprising the ~~recombinant expression cassette~~ polypeptide of claim 2 77.

5. (Original) The transgenic plant of claim 4, wherein the plant is a monocot or a dicot.

6. (Original) The transgenic plant of claim 5, wherein the plant is selected from the group consisting of: maize, soybean, sunflower, sorghum, canola, wheat, alfalfa, cotton, rice, barley and millet.

7-74 (Withdrawn)

75. (New) The cell of claim 3, wherein the cell is a plant cell.

76. (New) A transgenic seed from the plant of claim 4, comprising the polypeptide.

92 77. (New) An isolated polypeptide comprising an amino acid sequence having at least 80% sequence identity over the entire length of SEQ ID NO: 2 as determined by the GAP algorithm under default parameters, wherein the amino acid sequence encodes a polypeptide having flap endonuclease activity.

78. (New) The polypeptide of claim 77 wherein the amino acid sequence has at least 85% sequence identity to SEQ ID NO: 2.

79. (New) The polypeptide of claim 77 wherein the amino acid sequence has at least 90% sequence identity to SEQ ID NO: 2.

80. (New) The polypeptide of claim 77 wherein the amino acid sequence has at least 95% sequence identity to SEQ ID NO: 2.

81. (New) An isolated polypeptide comprising the polypeptide of SEQ ID NO: 2, wherein the polypeptide has flap endonuclease activity.

82. (New) A host cell comprising the polypeptide of claim 81.

83. (New) The cell of claim 82, wherein the cell is a plant cell.
84. (New) A transgenic plant comprising the polypeptide of claim 81.
85. (New) The plant of claim 84, wherein the plant is a monocot or a dicot.
86. (New) The plant of claim 84, wherein the plant is selected from the group consisting of: maize, soybean, sunflower, sorghum, canola, wheat, alfalfa, cotton, rice, barley and millet.
87. (New) A transgenic seed from the plant of claim 84, comprising the polypeptide.
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